

the ovary and uterus of rabbits, and could show that this drug stimulates the development of follicles in the immature rabbit. Ovulation occurred once, which is particularly interesting since rabbits do not ovulate spontaneously. In mature rabbits marked hyperemia of the uterus occurred, the number of ripe follicles increased, and ovulation occurred again in one animal. Mature and immature rabbits showed hemorrhages into follicles.

Fuerstner⁷ studied the reaction of ovaries and tubes of rabbits to repeated vascular spasms induced with pitressin, and produced active hyperemia in the tubes accompanied by cellular infiltration. The ovaries showed a similar active hyperemia and an obvious increase in the number of ripe follicles. Ovulation occurred in two animals. Marshall, Verney and Vogt⁸ had similar results with Picrotoxin.

Wilson and Kurzrok⁹ published two extremely interesting clinical cases in which a secretory endometrium was present on the sixth day after the completion of the menstrual flow. They explain this extraordinary finding as a temporary dissociation between the endometrial and the vascular components of the menstrual cycle. They state in their conclusion that the much-discussed "bleeding factor" in menstruation is seen as the potentially variable reaction of the endometrial blood vessels.

All these findings show that the vascular responsiveness of the female sex organs is at least partially independent of the hormone secretion. The parasympathetic nervous system seems to play an important rôle. This would explain the menstrual irregularities which have been ascribed—probably correctly—to changes in the environment, emotional shocks, and physical strain. Treatment in these cases should, therefore, be directed primarily to influencing the parasympathetic nervous system.

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ACUTE SUBDELTOID BURSITIS*

ACLINICAL picture characterized by sudden onset of agonizing pain and stiffness in the shoulder was described as early as 1872 by Duplay under the name of periarthritis humeroscapularis. He had correctly recognized the subdeltoid bursa as the seat of the lesion. Codman in 1904 called attention to the rôle of the tendons of the short rotators in the production of many lesions giving rise to painful shoulder. He stressed in particular the importance of rupture of the tendon of the supraspinatus muscle in the production of subdeltoid bursitis. With the advent of x-rays, calcified deposits were demonstrated in the substance of the tendons of the short rotators. As the result of observations in cadavers (Meyer) and in operations,

the following concept has been evolved: Repeated minor traumas produce minute tears in the substance of the tendons. These tears, because of poor circulation in a tendon, result in areas of local necrosis with formation of calcium deposits. At some time an area of calcification, usually in the tendon of the supraspinatus muscle, becomes the seat of an acute inflammatory process which produces tension in the unyielding fibers of the tendon. The acute inflammation extends to the overlying bursa. The resulting clinical picture is characterized by acute agonizing pain in the shoulder and exquisite tenderness over the great tuberosity and the insertion of the deltoid muscle. Any attempt at abduction increases the pain. X-ray examination usually discloses a relatively large calcified deposit. The acute stage subsides in one or two weeks with disappearance of the muscle spasm and pain and gradual return of motion. In cases in which complete recovery occurs, Codman believes, the soft calcified deposit has spontaneously ruptured into the bursa, whence it has been absorbed. Thus it appears that relief from pain and return to normal shoulder function depend on the relief of tension in the calcified area. This was readily accomplished by exploration of the bursa and incision of the calcified deposit in the supraspinatus tendon. The operation may be performed under general, local or brachial plexus block anesthesia. Haggart and Allen¹ obtained good results by injection of about 20 cubic centimeters of a 2 per cent procain hydrochlorid solution into the bursa and into the capsule of the shoulder joint. They believed that the relief of symptoms following this procedure was due to a more rapid removal of the calcified deposit due to improvement in the local circulation. They add, however, that injection of the tendon provides for rupture of some of the calcified material into the bursa, a point which Codman stressed as probably the means by which nature gives relief. Patterson and Darrach² obtained apparently as good results in the treatment of sixty-three patients with acute subdeltoid bursitis by introducing two needles into the bursa and forcing saline solution through one needle to flow out the other. They were able in that way to wash out the calcified deposits. Alanson Weeks³ in 1908 aspirated a subdeltoid bursa of a patient with acutely painful shoulder for diagnostic purposes. Although he had aspirated only about 1 cubic centimeter of straw-colored fluid, the patient experienced instantaneous relief from pain. Weeks has been able to obtain relief for forty patients by the simple procedure of multiple needling of the bursa whether he was able to withdraw fluid or not. He believes that the relief of symptoms is due to relief of tension effected by puncturing the firm walled sac in numerous places. The method is simple and may be performed under local or gas

⁷ Fuerstner, P. G.: Reaction of Tubes and Ovaries to Induced Vascular Spasm. In process of publication. Univ. of Calif. Publications in Pharmacology.

⁸ Marshall, F. H. A., Verney, E. B., and Vogt, M.: The Occurrence of Ovulation in the Rabbit as a Result of Stimulation of the Central Nervous System by Drugs, *J. Physiol.*, 97:128-132, 1939.

⁹ Wilson, L., and Kurzrok, R.: Menstruation and Endometrium, *Endocrinology*, 26:955-958 (June), 1940.

* From *Journal American Medical Association*, March 8, 1941.

¹ Haggart, G. E., and Allan, H. A.: Painful Shoulder: Diagnosis and Treatment with Particular Reference to Subacromial Bursitis, *S. Clin. North America*, 15:1537 (Dec.), 1935.

² Patterson, R. L., Jr., and Darrach, William: Treatment of Acute Bursitis by Needle Irrigation, *J. Bone & Joint Surg.*, 19:993 (Oct.), 1937.

³ Weeks, Alanson, and Delpart, G. D.: Subdeltoid Bursitis (Acute), *Internat. Clin.*, 3:40 (Sept.), 1936. Weeks, Alanson: Subdeltoid Bursitis, *Arch. Surg.*, 41:554 (Aug.), 1940.

inhalation anesthesia. According to Weeks, chronic conditions as well will be relieved and the calcium absorbed after the use of this method, unless the salt has organized into bony hardness, in which case surgical removal is justified.⁴

HIPPOCRATES' APHORISMS*

By MOSES SCHOLTZ, M. D.
Arcadia

SECTION FIVE (Continued)

23. Cold water is to be applied in bleeding
Or when one is expected, but not within
The center; also in inflammations,
And erysipelas with an unbroken skin.
24. Cold applications to the chest
Are mostly detrimental,
Being often in catarrhs and coughs,
And bleedings instrumental.
25. Joints, sore and swollen, gouty without ulcers,
Also sprains improve and gain
From applications of cold water,
Which checks the swelling and relieves the
pain.
26. That fluid is most light
Which quickly heats
And cools forthright.
27. Patients who suffer
With intense thirst,
Should try to quench it
Through sleeping, first.
28. The fumes of aromatics
Promote and bring on menses;
Their use would be much wider
But for heady consequences.
29. Pregnant women, upon indication
From the fourth to the seventh month can
well be purged;
But in the first and the last terms of gestation
Strong cleansing isn't safe and should be never
urged.
30. A pregnant woman
With an acute disease
Is in great danger
Of decease.
31. If a pregnant woman starts to bleed,
She is quite likely to abort;
And the larger fetus she may bear,
The more likely's the issue of this sort.
32. Hemoptysis occurring in a woman
Can well be caused to stop or to abate,
If her menses can be started
To flow normal and adequate.
33. A woman who is suffering
From stoppage of her monthly flows,
Easily obtains relief
With a bleeding from the nose.
34. If a pregnant woman's seized
With a violent bowel's-purging,
The perils of abortion
Around her are surging.
35. If in a hysteric woman
A fit of sneezing does occur
In the midst of tedious labor,
Sneezing acts as accoucheur.
36. When menstrual discharge is bad of color
And is irregular in quality,
That means that woman is in need of purging
Or of emmenagogues quite urgently.
37. If in a pregnant woman
The breasts lose suddenly
Their previous engorgement,
Miscarriage impends instantly.
38. If in pregnancy with twins
The fullness of one breast should fail,
One twin is lost: left breast
Means the female; right breast, the male.
39. If a woman who isn't heavy with a child
And hasn't delivered one of late,
Has milk secretions in her breasts,
Her menses 're in obstructed state.
40. If blood engorges
A woman's breast,
A state of madness
Is manifest.
41. To test if a woman is with child,
Give her a draft of hydromel
On fasting stomach, before sleep:
If she is griped, her womb will swell.
42. If a pregnant woman has good color,
She is sure to bear a male;
But, if her color is unhealthy,
Her offspring's a female.
43. Erysipelas
Of the womb,
In a pregnant woman
Spells her doom.
44. Women who are very lean
Easily abort,
Until they gain enough in weight
Their fetus to support.
45. If middleweight women do abort
At an early term,
Their placenta, filled with mucus,
Tears asunder, not being firm.
46. Women who are too obese
Don't easily conceive,
As the fat-occluded cervix
Precludes the sperm to live.

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(To be continued)

⁴ Weeks, Alanson, and Delprat, G. D.: Acute Subdeltoid or Subacromial Bursitis—A Suggestion, *California and West. Med.*, 41:4 (Oct.), 1934.

* For other aphorisms, see *CALIFORNIA AND WESTERN MEDICINE*, March 1940, page 125; April 1940, page 179; May 1940, page 231; July 1940, page 35; August 1940, page 85; September 1940, page 130; December 1940, page 272; January 1941, page 27; February 1941, page 82; March 1941, page 124.